

Names: \_\_\_\_\_

Date: \_\_\_\_\_

## ***Electricity Wiki 2012***



**Directions:** Your group will research one method humans use to generate electricity on a large scale and explain the benefits and drawbacks of it. Additionally, your group will explain what role you think this method will play in the future and why. Your group will present this information in the form of a wiki with links to other pages. This is for a ***test grade***, so do your best.

**Information-**Your wiki page must answer each of the following questions:

1. ***How does it work?*** Most methods of generating electricity involve moving magnets near wires to generate electricity. Be sure to have a good explanation of all steps with the last one being the moving magnet. Pictures and/or models will be useful for this section and be sure to explain the transformation of different forms of energy into electrical energy.
2. ***How widespread is it?*** In this section your group should explain about how much electricity is generated worldwide using this method. Additionally, you should create a link to Google Earth that displays some different locations in regions you've studied in social studies.
3. ***How efficient is it?*** Efficiency is about energy input vs energy output. You need to evaluate your particular method and tell what the ratio of energy in to energy out.
4. ***What are the benefits and drawbacks of this method of producing electricity?*** Your group needs to evaluate your particular method. Any method of generating electricity has an effect on nature so your group should keep this in mind. Ask yourself, "Why would a city want to use this method?" and "What problems would using this method cause a city?". (Ex: This method releases a large amount of energy and is able to generate a lot of electricity but is only available in certain areas of the world.)
5. ***What role do you think this method will have in the future?*** The role this method of generating electricity will play in the future will require you to imagine what the world will be like and how we will produce electricity. Ask yourself, "Will this method be obsolete in the future or is it likely to be more widespread?". Things to keep in mind are the environmental challenges we face, the ever increasing human population, and the limited resources of the planet. This section is like a persuasive essay in that your group will need to state it's collective opinion and support it with facts.

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### ***Electricity Wiki Rubric***

<b>Content: 45 points</b>				
<b>45/45</b>	<b>30/45</b>	<b>15/45</b>	<b>0/45</b>	
<ul style="list-style-type: none"> <li>• All steps in the method are clearly explain</li> <li>• Explanation is correct</li> <li>• Usage is correct</li> <li>• Efficiency is accurate</li> <li>• Benefits are well elaborated on</li> <li>• Drawbacks are well elaborated on</li> <li>• Opinion about future role is clearly stated</li> <li>• Opinion is well supported with facts</li> <li>• All key vocabulary is used</li> </ul>	<ul style="list-style-type: none"> <li>• Most steps in method are clearly explained, though some may be left out or incorrect</li> <li>• Explanation is mostly correct, but there are some misconceptions or ideas left out</li> <li>• Usage is correct but some information is inaccurate</li> <li>• Efficiency is mostly accurate, but there are some mistakes</li> <li>• Benefits could use more information and/or explanation is unclear</li> <li>• Drawbacks could use more information and/or explanation is unclear</li> <li>• Opinion about the future role is somewhat unclear</li> <li>• Opinion needs more support</li> <li>• Some science vocabulary is used though some words are left out or used incorrectly</li> </ul>	<ul style="list-style-type: none"> <li>• Many steps in the method are missing and/or many are incorrect</li> <li>• Explanation is somewhat correct, though there are many misconceptions and ideas left out</li> <li>• Usage is complete inaccurate</li> <li>• Efficiency is completely inaccurate</li> <li>• Benefits need a lot more information and explanation is completely unclear</li> <li>• Drawbacks need a lot more information and explanation is completely unclear</li> <li>• Opinion about future is not clear</li> <li>• Opinion needs a lot more support</li> <li>• Very little vocabulary used and/or many words are used incorrectly</li> </ul>	<ul style="list-style-type: none"> <li>• Few steps in method are described and all are incorrect</li> <li>• Explanation is totally incorrect and most ideas are left out</li> <li>• Usage is not mentioned</li> <li>• Efficiency is not mentioned</li> <li>• Benefits have almost no description and all ideas are incorrect</li> <li>• Drawbacks have almost no description and all ideas are incorrect</li> <li>• Opinion about future is totally unclear</li> <li>• Opinion has no support</li> <li>• No science vocabulary used and/or all words are used incorrectly</li> </ul>	<div style="border-top: 1px solid black; display: inline-block; width: 100px;"></div> <b>/45</b>

<b>Wiki Page Organization and Appearance: 25 points</b>			
<b>25/25</b>	<b>16/25</b>	<b>8/25</b>	
<ul style="list-style-type: none"> <li>• Very neat</li> <li>• Color images support text</li> <li>• Interesting layout</li> <li>• Text has an informative introduction</li> <li>• Text is written in well-organized paragraphs</li> <li>• Links to other pages that work</li> </ul>	<ul style="list-style-type: none"> <li>• Mostly neat</li> <li>• Color images support text somewhat and/or may be difficult to see</li> <li>• Layout could use some work</li> <li>• Text has a recognizable introduction but it may need some work</li> <li>• Paragraphing is attempted though organization may need work</li> <li>• Links to other pages don't work</li> </ul>	<ul style="list-style-type: none"> <li>• Very sloppy</li> <li>• Very few pictures that are difficult to see and don't support text</li> <li>• Layout is very confusing</li> <li>• Text has no introduction</li> <li>• No paragraphing is attempted</li> <li>• No links to other pages</li> </ul>	<u>        </u> /25
<b>Writing: 10 points</b>			
<b>10/10</b>	<b>6/10</b>	<b>3/10</b>	
<ul style="list-style-type: none"> <li>• Complex and simple sentences</li> <li>• Purposeful and varied sentence beginnings</li> <li>• purposeful and varied sentence structure</li> <li>• spelling generally correct</li> <li>• punctuation is accurate</li> <li>• capitalization, grammar, and usage are correct</li> </ul>	<ul style="list-style-type: none"> <li>• some complex sentences, but many are simple</li> <li>• some variety in sentence beginnings</li> <li>• sentences are usually constructed correctly</li> <li>• spelling usually correct but some mistakes</li> <li>• most punctuation is correct</li> <li>• problems with grammar and usage but these are not serious</li> </ul>	<ul style="list-style-type: none"> <li>• mostly simple sentences</li> <li>• repetitive beginnings</li> <li>• incorrect construction</li> <li>• spelling errors are frequent</li> <li>• punctuation is missing or often incorrect</li> <li>• errors in grammar and usage take away from meaning</li> </ul>	<u>        </u> /10
<b>Bibliography: 5 points</b>			
<b>5/5</b>	<b>3/5</b>	<b>1/5</b>	
<ul style="list-style-type: none"> <li>• All sources cited</li> <li>• All relevant information included</li> </ul>	<ul style="list-style-type: none"> <li>• Missing one or more sources</li> <li>• Some information missing</li> </ul>	<ul style="list-style-type: none"> <li>• Most sources not cited</li> <li>• Most or all of the information is missing</li> </ul>	<u>        </u> /5
<b>Partner Grade: 15 points</b>			
<b>15/15</b>	<b>10/15</b>	<b>5/15</b>	
<ul style="list-style-type: none"> <li>• Partner was extremely helpful</li> <li>• Partner did her/his share of the work</li> <li>• Partner cooperated well</li> </ul>	<ul style="list-style-type: none"> <li>• Partner was helpful at times</li> <li>• Partner did some work but could have done more</li> <li>• Partner was uncooperative at times</li> </ul>	<ul style="list-style-type: none"> <li>• Partner was not helpful</li> <li>• Partner did little work</li> <li>• Partner argued a lot and was very uncooperative</li> </ul>	<u>        </u> /15

**Total Points:**                 /100

## **Different Ways to Produce Electricity**

1. hydroelectric power
2. nuclear power
3. wind power
4. solar power
5. geothermal power
6. tidal power
7. burning fossil fuels